

SEQUENCE LISTING

<110> Lees, Ann M.
 Lees, Robert S.
 Law, Simon W.
 Arjona, Anibal A.

<120> NOVEL LOW DENSITY LIPOPROTEIN BINDING
 PROTEINS AND THEIR USE IN DIAGNOSING AND TREATING
 ATHEROSCLEROSIS

<130> 10797-004001

<140> US 09/616,289

<141> 2000-07-14

<150> US 09/517,849

<151> 2000-03-02

<150> US 08/979,608

<151> 1997-11-26

<150> US 60/031,930

<151> 1996-11-27

<150> US 60/048,547

<151> 1997-06-03

<160> 53

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 151

<212> PRT

<213> Oryctolagus cuniculus

<400> 1

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Asp	Glu	Tyr	Asp	Glu	Asn	Lys	Phe	Val	Asp	Glu	Glu	Asp	Gly	Gly	Asp
		20						25					30		
Gly	Gln	Ala	Gly	Pro	Asp	Glu	Gly	Glu	Val	Asp	Ser	Cys	Leu	Arg	Gln
		35					40					45			
Gly	Asn	Met	Thr	Ala	Ala	Leu	Gln	Ala	Ala	Leu	Lys	Asn	Pro	Pro	Ile
	50					55					60				
Asn	Thr	Arg	Ser	Gln	Ala	Val	Lys	Asp	Arg	Ala	Gly	Ser	Ile	Val	Leu
65				70					75					80	
Lys	Val	Leu	Ile	Ser	Phe	Lys	Ala	Gly	Asp	Ile	Glu	Lys	Ala	Val	Gln
			85					90					95		
Ser	Leu	Asp	Arg	Asn	Gly	Val	Asp	Leu	Leu	Met	Lys	Tyr	Ile	Tyr	Lys
		100					105					110			
Gly	Phe	Glu	Ser	Pro	Ser	Asp	Asn	Ser	Ser	Ala	Val	Leu	Leu	Gln	Trp
		115				120					125				
His	Glu	Lys	Ala	Leu	Ala	Ala	Gly	Gly	Val	Gly	Ser	Ile	Val	Arg	Val
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Leu Thr Ala Arg Lys Thr Val
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<211> 317
<212> PRT
<213> *Oryctolagus cuniculus*

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<222> (1)...(317)
<223> Xaa = Any Amino Acid

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20 25 30
Tyr Leu Gly Gly Ser Ser Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg
35 40 45
Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu
50 55 60
Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly
65 70 75 80
Arg Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala
85 90 95
Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu
100 105 110
Asp Asp Glu Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val
115 120 125
Pro Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly
130 135 140
Gly Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser
145 150 155 160
Leu Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala
165 170 175
Gly Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu
180 185 190
Gly Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val
195 200 205
Pro Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro
210 215 220
Phe Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu
225 230 235 240
Trp Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro
245 250 255
Glu Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu
260 265 270
Leu Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu
275 280 285
Gly Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln
290 295 300
Gly His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
305 310 315

<210> 3
<211> 232

<212> PRT

<213> Oryctolagus cuniculus

<400> 3

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 Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp
 20 25 30
 Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp Arg
 35 40 45
 Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly Glu Arg Gly Pro
 50 55 60
 Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His
 65 70 75 80
 Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg
 85 90 95
 Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly Gly Ser Ala Ser
 100 105 110
 Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro Gly
 115 120 125
 Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro Ala
 130 135 140
 Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp Thr Val Met Asp
 145 150 155 160
 Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr Ala
 165 170 175
 Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln Arg
 180 185 190
 Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu Lys
 195 200 205
 Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu Asp
 210 215 220
 Asp Asp Pro Glu Gly Phe Leu Gly
 225 230

<210> 4

<211> 252

<212> PRT

<213> Oryctolagus cuniculus

<400> 4

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 20 25 30
 Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp
 35 40 45
 Asp Glu Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro
 50 55 60
 Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly
 65 70 75 80
 Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu
 85 90 95
 Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly
 100 105 110
 Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly
 115 120 125

Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro
 130 135 140
 Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe
 145 150 155 160
 Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp
 165 170 175
 Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu
 180 185 190
 Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu
 195 200 205
 Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly
 210 215 220
 Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly
 225 230 235 240
 His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
 245 250

<210> 5
 <211> 557
 <212> PRT
 <213> *Oryctolagus cuniculus*

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 1 5 10 15
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Ala Glu Gly Ala Gln Gly
 20 25 30
 Arg Pro Gly Arg Pro Ala Pro Ala Arg Glu Ala Glu Gly Ala Ser Ser
 35 40 45
 Gln Ala Pro Gly Arg Pro Glu Gly Ala Gln Ala Lys Thr Ala Gln Pro
 50 55 60
 Gly Ala Leu Cys Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu Asp
 65 70 75 80
 Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Ala Pro Gly Glu
 85 90 95
 Asp Gly Val Gln Gly Glu Pro Pro Glu Pro Glu Asp Ala Glu Lys Ser
 100 105 110
 Arg Ala Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Gly Thr Pro Val
 115 120 125
 Val Asn Gly Glu Lys Glu Thr Ser Lys Ala Glu Pro Gly Thr Glu Glu
 130 135 140
 Ile Arg Thr Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln
 145 150 155 160
 Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met
 165 170 175
 Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu
 180 185 190
 Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
 195 200 205
 Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys
 210 215 220
 Asp His Leu Arg Gly Glu His Ser Lys Ala Ile Leu Ala Arg Ser Lys
 225 230 235 240
 Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys
 245 250 255
 Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Glu Lys Arg Lys Glu
 260 265 270

Val Thr Ser His Phe Gln Met Thr Leu Asn Asp Ile Gln Leu Gln Met
 275 280 285
 Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu
 290 295 300
 Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg Glu
 305 310 315 320
 Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu
 325 330 335
 Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu
 340 345 350
 Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu
 355 360 365
 Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys
 370 375 380
 Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
 385 390 395 400
 Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu
 405 410 415
 Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met Tyr
 420 425 430
 Arg Ser Arg Trp Glu Ser Ser Asn Lys Ala Leu Leu Glu Met Ala Glu
 435 440 445
 Glu Lys Thr Leu Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys Ile
 450 455 460
 Gln Arg Leu Glu Lys Leu Cys Arg Ala Leu Gln Thr Glu Arg Asn Asp
 465 470 475 480
 Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Pro Val
 485 490 495
 Ser Asp Ser Gly Pro Glu Arg Arg Pro Glu Pro Ala Thr Thr Ser Lys
 500 505 510
 Glu Gln Gly Val Glu Gly Pro Gly Ala Gln Val Pro Asn Ser Pro Arg
 515 520 525
 Ala Thr Asp Ala Ser Cys Cys Ala Gly Ala Pro Ser Thr Glu Ala Ser
 530 535 540
 Gly Gln Thr Gly Pro Gln Glu Pro Thr Thr Ala Thr Ala
 545 550 555

<210> 6
 <211> 151
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Ser Lys Asn Thr Val Ser Ser Ala Arg Phe Arg Lys Val Asp Val
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 Asp Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp Gly Gly Asp
 20 25 30
 Gly Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln
 35 40 45
 Gly Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile
 50 55 60
 Asn Thr Lys Ser Gln Ala Val Lys Asp Arg Ala Gly Ser Ile Val Leu
 65 70 75 80
 Lys Val Leu Ile Ser Phe Lys Ala Asn Asp Ile Glu Lys Ala Val Gln
 85 90 95
 Ser Leu Asp Lys Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys
 100 105 110

Gly Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Met Leu Leu Gln Trp
 115 120 125
 His Glu Lys Ala Leu Ala Ala Gly Gly Val Gly Ser Ile Val Arg Val
 130 135 140
 Leu Thr Ala Arg Lys Thr Val
 145 150

<210> 7
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 7
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 Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu Ser
 20 25 30
 Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg Gly
 35 40 45
 Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly Pro
 50 55 60
 His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly Thr
 65 70 75 80
 Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr Ala
 85 90 95
 Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro
 100 105 110
 Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro
 115 120 125
 Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val Met
 130 135 140
 Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr
 145 150 155 160
 Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln
 165 170 175
 Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu
 180 185 190
 Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu
 195 200 205
 Asp Asp Asp Pro Asp Gly Phe Leu Gly
 210 215

<210> 8
 <211> 530
 <212> PRT
 <213> Homo sapiens

<400> 8
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Pro Glu Gly Ala Gln Glu
 1 5 10 15
 Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly Ser
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 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
 35 40 45
 Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
 50 55 60
 Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly

Arg Ala
530

<210> 9
<211> 20
<212> PRT
<213> Homo sapiens

<400> 9
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Gly Gly Asp Gly
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<210> 10
<211> 1404
<212> DNA
<213> Oryctolagus cuniculus

<220>
<221> CDS
<222> (58)...(510)

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Ser Lys Asn Thr Val Ser Ser Ala Arg Phe Arg Lys Val Asp Val Asp
5 10 15

gag tac gac gag aac aag ttc gtg gac gag gaa gac ggc ggc gac ggc 156
Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp Gly Gly Asp Gly
20 25 30

cag gcg ggg ccg gac gag ggc gag gtg gac tgc tgc ctg cgg caa ggg 204
Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln Gly
35 40 45

aac atg aca gcc gcc ctg cag gcg gcg ctg aag aac cct ccc atc aac 252
Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile Asn
50 55 60 65

acc agg agc cag gcg gtg aag gac cgg gca ggc agc atc gtg ctg aag 300
Thr Arg Ser Gln Ala Val Lys Asp Arg Ala Gly Ser Ile Val Leu Lys
70 75 80

gtg ctc atc tcc ttc aag gcc ggc gac ata gaa aag gcc gtg cag tcc 348
Val Leu Ile Ser Phe Lys Ala Gly Asp Ile Glu Lys Ala Val Gln Ser
85 90 95

ctg gac agg aac ggc gtg gac ctg ctc atg aag tac atc tac aag ggc 396
Leu Asp Arg Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys Gly
100 105 110

ttc gag agc ccc tcc gac aac agc agc gcc gtg ctc ctg cag tgg cac 444

Phe Glu Ser Pro Ser Asp Asn Ser Ser Ala Val Leu Leu Gln Trp His
 115 120 125
 gag aag gcg ctg gct gca gga gga gtg ggc tcc atc gtc cgt gtc ctg 492
 Glu Lys Ala Leu Ala Ala Gly Gly Val Gly Ser Ile Val Arg Val Leu
 130 135 140 145
 act gca agg aaa acc gtg tagcctggca ggaacgggtg cctgccgggg 540
 Thr Ala Arg Lys Thr Val
 150
 agcgggagct gccggtacaa agacaaaaac gccagatgc cgcgctgcc ctgtgggagg 600
 cgtctgttcc cagcttcgct ttttcccttt cccgtgtctg tcaggattac ataaggtttc 660
 ccttcgtgag aatcggagtg gcgcagaggg tcctgttcat acgcgcctg cgtccggctg 720
 tgtaagaccc ctgccttcag gtccttgag caacggtagc gtgtcgccgg ctgggttttg 780
 ttttgtctg gagggatctg gtcagaattt gaggccagtt tcctaactca ttgctggtca 840
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 ctcttccctt atttaagcag agtgagtttc tggaaccagt ggtgcccccc cccccgcccc 960
 ggccgcgctc ctgctcaagg gaagcctccc tgcagagcag cagagccccct gggcaggagc 1020
 gccgcgtccc gctcccagga gacagcatgc gcggtcacgc ggcacttcct gtgcctccca 1080
 gcccagtgcc cccggagttc ttcagggcga cagggacctc agaagactgg atccgatcca 1140
 gagcacgccc cattcttggt tcagctcagt gttttcaaaa ggaacgtgct accgtgggta 1200
 gagcacactg gttctcagaa cacggccggc gcttgacggg tgtcacagct ccagaacaaa 1260
 tcttgggaga caggcgagcg cgagtcgccg ggcaggaatt ccacacactc gtgctgtttt 1320
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 tgttgacaaa aaaaaaaaaa aaaa 1404
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 <211> 1617
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 <213> *Oryctolagus cuniculus*
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 <221> CDS
 <222> (1)...(951)
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 cgg gcc ggc ggc ccg gcg cgg ccc gtg agc ctg cgg gaa gtc gtg cgc 96
 Arg Ala Gly Gly Pro Ala Arg Pro Val Ser Leu Arg Glu Val Val Arg 30
 20 25
 tac ctc ggg ggt agc agc ggc gct ggc ggc cgc ctg acc cgc ggc cgc 144
 Tyr Leu Gly Gly Ser Ser Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg 45
 35 40
 gtg cag ggt ctg ctg gaa gag gag gcg gcg gcg cgg ggc cgc ctg gag 192
 Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu 60
 50 55
 cgc acc cgt ctc gga gcg ctt gcg ctg ccc cgc ggg gac agg ccc gga 240
 Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly 75
 65 70

cgg gcg cca ccg gcc gcc agc gcc cgc gcg gcg cgg aac aag aga gct	288
Arg Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala	
80 85 90 95	
ggc gag gag cga gtg ctt gaa aag gag gag gag gag gag gag gag gaa	336
Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Glu	
100 105 110	
gac gac gag gac gac gac gac gac gtc gtg tcc gag ggc tcc gag gtg	384
Asp Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val	
115 120 125	
ccc gag agc gat cgt ccc gcg ggt gcg cag cat cac cag ctg aat ggc	432
Pro Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly	
130 135 140	
ggc gag cgc ggc ccg cag acc gcc aag gag cgg gcc aag gag tgg tcc	480
Gly Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser	
145 150 155	
ctg tgt ggc ccc cac cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg	528
Leu Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala	
160 165 170 175	
ggc agt ggc acc cgc cag gtg ttc tcc atg gcg gcc ttg agt aag gag	576
Gly Ser Gly Thr Arg Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu	
180 185 190	
ggg gga tca gcc tct tcc acc acc ggg cct gac tcc ccg tcc ccg gtg	624
Gly Gly Ser Ala Ser Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val	
195 200 205	
cct ttg ccc ccc ggg aag cca gcc ctc cca gga gcc gat ggg acc ccc	672
Pro Leu Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro	
210 215 220	
ttt ggc tgc cct gcc ggg cgc aaa gag aag ccg gca gac ccc gtg gag	720
Phe Gly Cys Pro Ala Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu	
225 230 235	
tgg aca gtc atg gac gtc gtg gag tac ttc acc gag gcg ggc ttc cct	768
Trp Thr Val Met Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro	
240 245 250 255	
gag caa gcc acg gct ttc cag gag cag gag atc gac ggc aag tcc ctg	816
Glu Gln Ala Thr Ala Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu	
260 265 270	
ctg ctc atg cag cgc acc gat gtc ctc acc ggc ctg tcc atc cgc ctg	864
Leu Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu	
275 280 285	
ggg cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag	912
Gly Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln	
290 295 300	
ggg cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag	961
Gly Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln	
290 295 300	

Gly His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly
 305 310 315

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gcccgcgcgc cccttgcccc cccccccacc ccgcctggac ccattcctgc ctccatgtca 1021
cccaagggtgt cccagaggcc aggagctgga ctgggcaggc gaggggtgcg gacctaccct 1081
gattctggta gggggcgggg ccttgctgtg ctcatgtcta cccccccacc ccgtgtgtgt 1141
ctctgcacct gccccagca caccctccc ggagcctgga tgcgcctgg gactctggcc 1201
tgctcatttt gccccagat cagccccctc cctccctcct gtcccaggac attttttaaa 1261
agaaaaaaag gaaaaaaa aattggggag ggggctggga aggtgcccc agatcctcct 1321
cggcccaacc aggtgtttat tcctatatat atatatatat gttttgttct gcctgttttt 1381
cgtttttttg tgcgtggcct ttcttccctc ccaccaccac tcatggcccc agccctgtc 1441
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ccctctctcc cgttggttct gttgtcgctc cagctggctg tattgttttt taatattgca 1561
ccgaagggtt gttttttttt ttttaaataa aatttttaaa aaaggaaaaa aaaaaa 1617

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<210> 12
 <211> 1362
 <212> DNA
 <213> *Oryctolagus cuniculus*

<220>
 <221> CDS
 <222> (1) ... (696)

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<400> 12
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Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly Glu Glu Arg Val
1 5 10 15

ctt gaa aag gag gag gag gag gag gag gaa gac gac gag gac gac 96
Leu Glu Lys Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp
20 25 30

gac gac gac gtc gtg tcc gag ggc tgc gag gtg ccc gag agc gat cgt 144
Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp Arg
35 40 45

ccc gcg ggt gcg cag cat cac cag ctg aat ggc ggc gag cgc ggc ccg 192
Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly Glu Arg Gly Pro
50 55 60

cag acc gcc aag gag cgg gcc aag gag tgg tgc ctg tgt ggc ccc cac 240
Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His
65 70 75

cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg ggc agt ggc acc cgc 288
Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg
85 90 95

cag gtg ttc tcc atg gcg gcc ttg agt aag gag ggg gga tca gcc tct 336
Gln Val Phe Ser Met Ala Ala Leu Ser Lys Glu Gly Gly Ser Ala Ser
100 105 110

tcg acc acc ggg cct gac tcc ccg tcc ccg gtg cct ttg ccc ccc ggg 384
Ser Thr Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro Gly
115 120 125

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aag cca gcc ctc cca gga gcc gat ggg acc ccc ttt ggc tgc cct gcc 432
 Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro Ala
 130 135 140

ggg cgc aaa gag aag ccg gca gac ccc gtg gag tgg aca gtc atg gac 480
 Gly Arg Lys Glu Lys Pro Ala Asp Pro Val Glu Trp Thr Val Met Asp
 145 150 155 160

gtc gtg gag tac ttc acc gag gcg ggc ttc cct gag caa gcc acg gct 528
 Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr Ala
 165 170 175

ttc cag gag cag gag atc gac ggc aag tcc ctg ctg ctc atg cag cgc 576
 Phe Gln Glu Gln Glu Ile Asp Gly Lys Ser Leu Leu Leu Met Gln Arg
 180 185 190

acc gat gtc ctc acc ggc ctg tcc atc cgc ctg ggg cca gcg ttg aaa 624
 Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly Pro Ala Leu Lys
 195 200 205

atc tat gag cac cat atc aag gtg ctg cag cag ggt cac ttc gag gac 672
 Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly His Phe Glu Asp
 210 215 220

gat gac ccg gaa ggc ttc ctg gga tgagcacaga gccgccgcgc cccttgcccc 726
 Asp Asp Pro Glu Gly Phe Leu Gly
 225 230

caccgccacc ccgcctggac ccattcctgc ctccatgtca cccaaggtgt cccagaggcc 786
 aggagctgga ctgggcaggc gaggggtgcg gacctaccct gattctggta gggggcgggg 846
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 caccctccc ggagcctgga tgctgcctgg gactctggcc tgctcatttt gccccagat 966
 cagccccctc cctccctcct gtcccaggac attttttaa agaaaaaaag gaaaaaaaaa 1026
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 <213> *Oryctolagus cuniculus*

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gcg cca ccg gcc gcc agc gcc cgc gcg gcg cgg aac aag aga gct ggc 96
 Ala Pro Pro Ala Ala Ser Ala Arg Ala Ala Arg Asn Lys Arg Ala Gly
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gac gag gac gac gac gac gac gtc gtg tcc gag ggc tcg gag gtg ccc Asp Glu Asp Asp Asp Asp Asp Val Val Ser Glu Gly Ser Glu Val Pro 50 55 60	192
gag agc gat cgt ccc gcg ggt gcg cag cat cac cag ctg aat ggc ggc Glu Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Gly 65 70 75 80	240
gag cgc ggc ccg cag acc gcc aag gag cgg gcc aag gag tgg tcg ctg Glu Arg Gly Pro Gln Thr Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu 85 90 95	288
tgt ggc ccc cac cct ggc cag gag gaa ggg cgg ggg ccg gcc gcg ggc Cys Gly Pro His Pro Gly Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly 100 105 110	336
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ctc atg cag cgc acc gat gtc ctc acc ggc ctg tcc atc cgc ctg ggg Leu Met Gln Arg Thr Asp Val Leu Thr Gly Leu Ser Ile Arg Leu Gly 210 215 220	672
cca gcg ttg aaa atc tat gag cac cat atc aag gtg ctg cag cag ggt Pro Ala Leu Lys Ile Tyr Glu His His Ile Lys Val Leu Gln Gln Gly 225 230 235 240	720
cac ttc gag gac gat gac ccg gaa ggc ttc ctg gga tgagcacaga His Phe Glu Asp Asp Asp Pro Glu Gly Phe Leu Gly 245 250	766

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 Met Lys Asn Gln Asp Lys Lys Asn Gly Ala Ala Lys Gln Pro Asn Pro
 1 5 10 15
 aaa agc agc ccg gga cag ccg gaa gca gga gcg gag gga gcc cag ggg 156
 Lys Ser Ser Pro Gly Gln Pro Glu Ala Gly Ala Glu Gly Ala Gln Gly
 20 25 30
 cgg ccc ggc cgg ccg gcc ccc gcc cga gaa gcc gaa ggt gcc agc agc 204
 Arg Pro Gly Arg Pro Ala Pro Ala Arg Glu Ala Glu Gly Ala Ser Ser
 35 40 45
 cag gct ccc ggg agg ccg gag ggg gct caa gcc aaa act gct cag cct 252
 Gln Ala Pro Gly Arg Pro Glu Gly Ala Gln Ala Lys Thr Ala Gln Pro
 50 55 60
 ggg gcg ctc tgt gat gtc tct gag gag ctg agc cgc cag ttg gaa gac 300
 Gly Ala Leu Cys Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu Asp
 65 70 75 80
 ata ctc agt aca tac tgt gtg gac aac aac cag ggg gcc ccg ggt gag 348
 Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Ala Pro Gly Glu
 85 90 95
 gat ggg gtc cag ggt gag ccc cct gaa cct gaa gat gca gag aag tct 396
 Asp Gly Val Gln Gly Glu Pro Pro Glu Pro Glu Asp Ala Glu Lys Ser
 100 105 110
 cgc gcc tat gtg gca agg aat ggg gag ccg gag ccg ggc acc cca gta 444
 Arg Ala Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Gly Thr Pro Val
 115 120 125
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 Val Asn Gly Glu Lys Glu Thr Ser Lys Ala Glu Pro Gly Thr Glu Glu

130	135	140	
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Ile Arg Thr Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln			
145	150	155 160	
gaa aag aag aag gcc aag ggt ctg gga aag gag atc acg ctg ctg atg			588
Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met			
165	170	175	
cag aca ctg aac acg ctg agc acc cca gag gag aag ctg gcg gct ctg			636
Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu			
180	185	190	
tgc aag aag tat gcg gaa ctg ctc gag gag cac cgg aac tcg cag aag			684
Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys			
195	200	205	
cag atg aag ctg ctg cag aag aag cag agc cag ctg gtg cag gag aag			732
Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys			
210	215	220	
gac cac ctg cgt gcc gag cac agc aag gcc atc ctg gcc cgc agc aag			780
Asp His Leu Arg Gly Glu His Ser Lys Ala Ile Leu Ala Arg Ser Lys			
225	230	235 240	
ctc gag agc ctg tgc cgg gag ctg cag cgg cac aac cgc tcg ctc aag			828
Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys			
245	250	255	
gaa gaa ggt gtg cag cga gcc cga gag gag gag gag aag cgc aag gag			876
Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Glu Lys Arg Lys Glu			
260	265	270	
gtg acg tca cac ttc cag atg acg ctc aac gac att cag ctg cag atg			924
Val Thr Ser His Phe Gln Met Thr Leu Asn Asp Ile Gln Leu Gln Met			
275	280	285	
gag cag cac aac gag cgc aac tcc aag ctg cgc cag gag aac atg gag			972
Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu			
290	295	300	
ctg gcc gag cgg ctc aag aag ctg att gag cag tac gag ctg cga gaa			1020
Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg Glu			
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Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu			
325	330	335	
gtg gac gcc aag ctc cag cag gcc cag gag atg ctg aag gag gca gag			1116
Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu			
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Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu			
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gag aaa aca ctc cgg gac aaa gag ctg gaa ggc ctg cag gtg aaa atc Glu Lys Thr Leu Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys Ile 450 455 460	1452
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ctg aac aag agg gtg cag gac ctg agt gcc ggt ggc cag ggc ccc gtc Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Pro Val 485 490 495	1548
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<213> Homo sapiens

<220>

<221> CDS

<222> (118) ... (570)

<400> 15

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Met

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Glu Tyr Asp Glu Asn Lys Phe Val Asp Glu Glu Asp Gly Gly Asp Gly	
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cag gcc ggg ccc gac gag ggc gag gtg gac tcc tgc ctg cgg caa gga	264
Gln Ala Gly Pro Asp Glu Gly Glu Val Asp Ser Cys Leu Arg Gln Gly	
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Asn Met Thr Ala Ala Leu Gln Ala Ala Leu Lys Asn Pro Pro Ile Asn	
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Leu Asp Lys Asn Gly Val Asp Leu Leu Met Lys Tyr Ile Tyr Lys Gly	
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Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu Ser
20 25 30

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Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg Gly
35 40 45

cct cag agt gcc aag gag agg gtc aag gag tgg acc ccc tgc gga ccg 192
Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly Pro
50 55 60

cac cag ggc cag gat gaa ggg cgg ggg cca gcc ccg ggc agc ggc acc 240
His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly Thr
65 70 75 80

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Arg Gln Val Phe Ser Met Ala Ala Met Asn Lys Glu Gly Gly Thr Ala
85 90 95

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Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro Pro
100 105 110

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Gly Lys Pro Ala Leu Pro Gly Ala Asp Gly Thr Pro Phe Gly Cys Pro
115 120 125

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Pro Gly Arg Lys Glu Lys Pro Ser Asp Pro Val Glu Trp Thr Val Met
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Asp Val Val Glu Tyr Phe Thr Glu Ala Gly Phe Pro Glu Gln Ala Thr
145 150 155 160

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gag cgg ccc agc cag gcg gct cct gca gta gaa gca gaa ggt ccc ggc 95
 Glu Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly 30
 20 25

agc agc cag gct cct cgg aag ccg gag ggg gct caa gcc aga acg gct 143
 Ser Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala 45
 35 40

cag tct ggg gcc ctt cgt gat gtc tct gag gag ctg agc cgc caa ctg 191
 Gln Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu 60
 50 55

gaa gac ata ctg agc aca tac tgt gtg gac aat aac cag ggg ggc ccc 239
 Glu Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro 75
 65 70

ggc gag gat ggg gca cag ggt gag ccg gct gaa ccc gaa gat gca gag 287
 Gly Glu Asp Gly Ala Gln Gly Glu Pro Ala Glu Pro Glu Asp Ala Glu 95
 80 85 90

aag tcc cgg acc tat gtg gca agg aat ggg gag cct gaa cca act cca 335
 Lys Ser Arg Thr Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Thr Pro 110
 100 105

gta gtc tat gga gag aag gaa ccc tcc aag ggg gat cca aac aca gaa 383
 Val Val Tyr Gly Glu Lys Glu Pro Ser Lys Gly Asp Pro Asn Thr Glu 125
 115 120

gag atc cgg cag agt gac gag gtc gga gac cga gac cat cga agg cca 431
 Glu Ile Arg Gln Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro 140
 130 135

cag gag aag aaa gcc aag ggt ttg ggg aag gag atc acg ttg ctg 479
 Gln Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu 155
 145 150

atg cag aca ttg aat act ctg agt acc cca gag gag aag ctg gct gct 527
 Met Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala 175
 160 165 170

ctg tgc aag aag tat gct gaa ctg ctg gag gag cac cgg aat tca cag 575
 Leu Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln 190
 180 185

aag cag atg aag ctc cta cag aaa aag cag agc cag ctg gtg caa gag 623
 Lys Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu 205
 195 200

aag gac cac ctg cgc ggt gag cac agc aag gcc gtc ctg gcc cgc agc 671
 Lys Asp His Leu Arg Gly Glu His Ser Lys Ala Val Leu Ala Arg Ser 220
 210 215

aag ctt gag agc cta tgc cgt gag ctg cag cgg cac aac cgc tcc ctc 719
 Lys Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu 235
 225 230

aag gaa gaa ggt gtg cag cgg gcc cgg gag gag gag gag aag cgc aag 767
 Lys Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Lys Arg Lys 255
 240 245 250

gag gtg acc tcg cac ttc cag gtg aca ctg aat gac att cag ctg cag 815
 Glu Val Thr Ser His Phe Gln Val Thr Leu Asn Asp Ile Gln Leu Gln 270
 260 265

atg gaa cag cac aat gag cgc aac tcc aag ctg cgc caa gag aac atg 863
 Met Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met 285
 275 280

gag ctg gct gag agg ctc aag aag ctg att gag cag tat gag ctg cgc 911
 Glu Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg 300
 290 295

gag gag cat atc gac aaa gtc ttc aaa cac aag gac cta caa cag cag 959

Glu Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln
 305 310 315
 ctg gtg gat gcc aag ctc cag cag gcc cag gag atg cta aag gag gca 1007
 Leu Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala
 320 325 330 335
 gaa gag cgg cac cag cgg gag aag gat ttt ctc ctg aaa gag gca gta 1055
 Glu Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val
 340 345 350
 gag tcc cag agg atg tgt gag ctg atg aag cag caa gag acc cac ctg 1103
 Glu Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu
 355 360 365
 aag caa cag ctt gcc cta tac aca gag aag ttt gag gag ttc cag aac 1151
 Lys Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn
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 Thr Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met
 385 390 395
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 Glu Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met
 400 405 410 415
 tac cgg tcc cgg tgg gag agc agc aac aag gcc ctg ctt gag atg gct 1295
 Tyr Arg Ser Arg Trp Glu Ser Ser Asn Lys Ala Leu Leu Glu Met Ala
 420 425 430
 gag gag aaa aca gtc cgg gat aaa gaa ctg gag ggc ctg cag gta aaa 1343
 Glu Glu Lys Thr Val Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys
 435 440 445
 atc caa cgg ctg gag aag ctg tgc cgg gca ctg cag aca gag cgc aat 1391
 Ile Gln Arg Leu Glu Lys Leu Cys Arg Ala Leu Gln Thr Glu Arg Asn
 450 455 460
 gac ctg aac aag agg gta cag gac ctg agt gct ggt ggc cag ggc tcc 1439
 Asp Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Ser
 465 470 475
 ctc act gac agt ggc cct gag agg agg cca gag ggg cct ggg gct caa 1487
 Leu Thr Asp Ser Gly Pro Glu Arg Arg Pro Glu Gly Pro Gly Ala Gln
 480 485 490 495
 gca ccc agc tcc ccc agg gtc aca gaa gcg cct tgc tac cca gga gca 1535
 Ala Pro Ser Ser Pro Arg Val Thr Glu Ala Pro Cys Tyr Pro Gly Ala
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 ccg agc aca gaa gca tca ggc cag act ggg cct caa gag ccc acc tcc 1583
 Pro Ser Thr Glu Ala Ser Gly Gln Thr Gly Pro Gln Glu Pro Thr Ser
 515 520 525
 gcc agg gcc tagagagcct ggtgttgggt catgctggga agggagcggc 1632
 Ala Arg Ala

530

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tttgaagctg	cactggcagc	ttttttgtct	cctttgggta	ttcacaacag	ccagggaactt	4632
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aaaaa						4697

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<212> DNA
 <213> Homo sapiens

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48

60

ggc ggc gac ggc
 Gly Gly Asp Gly
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<210> 19
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 19
 Glu Glu Glu Glu Asp Asp Asp Glu Asp Glu Asp Glu Glu Asp Asp
 1 5 10 15

<210> 20
 <211> 26
 <212> PRT
 <213> Homo sapiens

<400> 20
 Glu Glu Glu Glu Asp Asp Asp Glu Asp Glu Asp Glu Glu Asp Asp Val
 1 5 10 15
 Ser Glu Gly Ser Glu Val Pro Glu Ser Asp
 20 25

<210> 21
 <211> 11
 <212> PRT
 <213> Homo sapiens

<400> 21
 Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp
 1 5 10

<210> 22
 <211> 10
 <212> PRT
 <213> Homo sapiens

<400> 22
 Glu Asp Asp Asp Pro Asp Gly Phe Leu Gly
 1 5 10

<210> 23
 <211> 30

<212> PRT
<213> Oryctolagus cuniculus

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<400> 23
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      5      10      15
  1
Gly Gly Asp Gly Gln Ala Gly Pro Asp Glu Gly Glu Val Asp
      20      25      30

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<210> 24
<211> 6
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<213> Oryctolagus cuniculus
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<400> 24
Asp Glu Gly Glu Val Asp
 1             5
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<210> 25
<211> 16
<212> PRT
<213> Oryctolagus cuniculus
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<400> 25
Glu Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp Asp Asp Asp
1 5 10 15

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<210> 26
<211> 28
<212> PRT
<213> Oryctolagus cuniculus
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<400> 26
Glu Glu Glu Glu Glu Glu Glu Glu Asp Asp Glu Asp Asp Asp Asp Asp
 1      5      10      15
Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp
      20      25

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<210> 27
<211> 12
<212> PRT
<213> Oryctolagus cuniculus
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<400> 27
Val Val Ser Glu Gly Ser Glu Val Pro Glu Ser Asp
      1             5             10
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<210> 28
<211> 10
<212> PRT
<213> Oryctolagus cuniculus
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<400> 28
Pro Pro Gly Lys Pro Ala Leu Pro Gly Ala
  1                      5                10

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<210> 29

<211> 15
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 29
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 1 5 10 15

<210> 30
 <211> 45
 <212> DNA
 <213> Homo sapiens

<400> 30
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45

<210> 31
 <211> 78
 <212> DNA
 <213> Homo sapiens

<400> 31
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 gaagtgcccg agagtgac

60
78

<210> 32
 <211> 33
 <212> DNA
 <213> Homo sapiens

<400> 32
 gtgtcagagg gctctgaagt gcccagagat gac

33

<210> 33
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 <212> DNA
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<400> 33
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30

<210> 34
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 <212> DNA
 <213> Homo sapiens

<400> 34
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 caggccgggc ccgacgaggg cgaggtggac

60
90

<210> 35
 <211> 18
 <212> DNA
 <213> Homo sapiens

<400> 35
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18

<210> 36
 <211> 48
 <212> DNA
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<400> 36
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<210> 37
 <211> 84
 <212> DNA
 <213> Homo sapiens

<400> 37
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 ggctcggagg tgcccgagag cgat 84

<210> 38
 <211> 36
 <212> DNA
 <213> Homo sapiens

<400> 38
 gtcgtgtccg agggctcgga ggtgcccag agcgat 36

<210> 39
 <211> 30
 <212> DNA
 <213> Homo sapiens

<400> 39
 cccccggga agccagccct cccaggagcc 30

<210> 40
 <211> 45
 <212> DNA
 <213> Homo sapiens

<400> 40
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<210> 41
 <211> 7
 <212> PRT
 <213> Homo sapiens

<400> 41
 Arg Asp Val Ser Glu Glu Leu
 1 5

<210> 42
 <211> 21
 <212> DNA
 <213> Homo sapiens

<400> 42

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<210> 43
 <211> 538
 <212> PRT
 <213> Homo sapiens

<400> 43
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 Thr Thr Ala Ala Ala Ser Ser Ser Ala Ala Ser Pro His Tyr Gln
 20 25 30
 Glu Trp Ile Leu Asp Thr Ile Asp Ser Leu Arg Ser Arg Lys Ala Arg
 35 40 45
 Pro Asp Leu Glu Arg Ile Cys Arg Met Val Arg Arg Arg His Gly Pro
 50 55 60
 Glu Pro Glu Arg Thr Arg Ala Glu Leu Glu Lys Leu Ile Gln Gln Arg
 65 70 75 80
 Ala Val Leu Arg Val Ser Tyr Lys Gly Ser Ile Ser Tyr Arg Asn Ala
 85 90 95
 Ala Arg Val Gln Pro Pro Arg Arg Gly Ala Thr Pro Pro Ala Pro Pro
 100 105 110
 Arg Ala Pro Arg Gly Ala Pro Ala Ala Ala Ala Ala Ala Pro Pro
 115 120 125
 Pro Thr Pro Ala Pro Pro Pro Pro Pro Ala Pro Val Ala Ala Ala
 130 135 140
 Pro Ala Arg Ala Pro Arg Ala Ala Ala Ala Ala Thr Ala Pro Pro
 145 150 155 160
 Ser Pro Gly Pro Ala Gln Pro Gly Pro Arg Ala Gln Arg Ala Ala Pro
 165 170 175
 Leu Ala Ala Pro Pro Pro Ala Pro Ala Pro Pro Ala Val Ala Pro
 180 185 190
 Pro Ala Gly Pro Arg Arg Ala Pro Pro Pro Ala Val Ala Ala Arg Glu
 195 200 205
 Pro Pro Leu Pro Pro Pro Pro Gln Pro Pro Ala Pro Pro Gln Gln Gln
 210 215 220
 Gln Pro Pro Pro Pro Gln Pro Gln Pro Pro Pro Glu Gly Gly Ala Val
 225 230 235 240
 Arg Ala Gly Gly Ala Ala Arg Pro Val Ser Leu Arg Glu Val Val Arg
 245 250 255
 Tyr Leu Gly Gly Ser Gly Gly Ala Gly Gly Arg Leu Thr Arg Gly Arg
 260 265 270
 Val Gln Gly Leu Leu Glu Glu Glu Ala Ala Ala Arg Gly Arg Leu Glu
 275 280 285
 Arg Thr Arg Leu Gly Ala Leu Ala Leu Pro Arg Gly Asp Arg Pro Gly
 290 295 300
 Arg Ala Pro Pro Ala Ala Ser Ala Arg Pro Ser Arg Ser Lys Arg Gly
 305 310 315 320
 Gly Glu Glu Arg Val Leu Glu Lys Glu Glu Glu Glu Asp Asp Asp Glu
 325 330 335
 Asp Glu Asp Glu Glu Asp Asp Val Ser Glu Gly Ser Glu Val Pro Glu
 340 345 350
 Ser Asp Arg Pro Ala Gly Ala Gln His His Gln Leu Asn Gly Glu Arg
 355 360 365
 Gly Pro Gln Ser Ala Lys Glu Arg Val Lys Glu Trp Thr Pro Cys Gly
 370 375 380
 Pro His Gln Gly Gln Asp Glu Gly Arg Gly Pro Ala Pro Gly Ser Gly

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20 25 30
Arg Pro Ser Gln Ala Ala Pro Ala Val Glu Ala Glu Gly Pro Gly Ser
35 40 45
Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
50 55 60
Ser Gly Ala Leu Arg Asp Val Ser Glu Glu Leu Ser Arg Gln Leu Glu
65 70 75 80
Asp Ile Leu Ser Thr Tyr Cys Val Asp Asn Asn Gln Gly Gly Pro Gly
85 90 95
Glu Asp Gly Ala Gln Gly Glu Pro Ala Glu Pro Glu Asp Ala Glu Lys
100 105 110
Ser Arg Thr Tyr Val Ala Arg Asn Gly Glu Pro Glu Pro Thr Pro Val
115 120 125
Val Asn Gly Glu Lys Glu Pro Ser Lys Gly Asp Pro Asn Thr Glu Glu
130 135 140
Ile Arg Gln Ser Asp Glu Val Gly Asp Arg Asp His Arg Arg Pro Gln
145 150 155 160
Glu Lys Lys Lys Ala Lys Gly Leu Gly Lys Glu Ile Thr Leu Leu Met
165 170 175
Gln Thr Leu Asn Thr Leu Ser Thr Pro Glu Glu Lys Leu Ala Ala Leu
180 185 190
Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
195 200 205
Gln Met Lys Leu Leu Gln Lys Lys Gln Ser Gln Leu Val Gln Glu Lys
210 215 220
Asp His Leu Arg Gly Glu His Ser Lys Ala Val Leu Ala Arg Ser Lys
225 230 235 240
Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg His Asn Arg Ser Leu Lys

245 250 255
 Glu Glu Gly Val Gln Arg Ala Arg Glu Glu Glu Glu Lys Arg Lys Glu
 260 265 270
 Val Thr Ser His Phe Gln Val Thr Leu Asn Asp Ile Gln Leu Gln Met
 275 280 285
 Glu Gln His Asn Glu Arg Asn Ser Lys Leu Arg Gln Glu Asn Met Glu
 290 295 300
 Leu Ala Glu Arg Leu Lys Lys Leu Ile Glu Gln Tyr Glu Leu Arg Glu
 305 310 315 320
 Glu His Ile Asp Lys Val Phe Lys His Lys Asp Leu Gln Gln Gln Leu
 325 330 335
 Val Asp Ala Lys Leu Gln Gln Ala Gln Glu Met Leu Lys Glu Ala Glu
 340 345 350
 Glu Arg His Gln Arg Glu Lys Asp Phe Leu Leu Lys Glu Ala Val Glu
 355 360 365
 Ser Gln Arg Met Cys Glu Leu Met Lys Gln Gln Glu Thr His Leu Lys
 370 375 380
 Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
 385 390 395 400
 Leu Ser Lys Ser Ser Glu Val Phe Thr Thr Phe Lys Gln Glu Met Glu
 405 410 415
 Lys Met Thr Lys Lys Ile Lys Lys Leu Glu Lys Glu Thr Thr Met Tyr
 420 425 430
 Arg Ser Arg Trp Glu Ser Ser Asn Lys Ala Leu Leu Glu Met Ala Glu
 435 440 445
 Glu Lys Thr Val Arg Asp Lys Glu Leu Glu Gly Leu Gln Val Lys Ile
 450 455 460
 Gln Arg Leu Glu Lys Leu Cys Arg Ala Leu Gln Thr Glu Arg Asn Asp
 465 470 475 480
 Leu Asn Lys Arg Val Gln Asp Leu Ser Ala Gly Gly Gln Gly Ser Leu
 485 490 495
 Thr Asp Ser Gly Pro Glu Arg Arg Pro Glu Gly Pro Gly Ala Gln Ala
 500 505 510
 Pro Ser Ser Pro Arg Val Thr Glu Ala Pro Cys Tyr Pro Gly Ala Pro
 515 520 525
 Ser Thr Glu Ala Ser Gly Gln Thr Gly Pro Gln Glu Pro Thr Ser Ala
 530 535 540
 Arg Ala
 545

<210> 45
 <211> 1614
 <212> DNA
 <213> Homo sapiens

<220>
 <221> CDS
 <222> (1)...(1614)

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 Met Ala Gly Pro Pro Ala Leu Pro Pro Pro Glu Thr Ala Ala Ala Ala
 1 5 10 15

48

acc acg gcg gcc gcc gcc tcg tcg tcc gcc gct tcc ccg cac tac caa
 Thr Thr Ala Ala Ala Ala Ser Ser Ser Ala Ala Ser Pro His Tyr Gln
 20 25 30

96

gag tgg atc ctg gac acc atc gac tgc ctg cgc tgc cgc aag gcg cgg 144
 Glu Trp Ile Leu Asp Thr Ile Asp Ser Leu Arg Ser Arg Lys Ala Arg
 35 40 45
 ccg gac ctg gag cgc atc tgc cgg atg gtg cgg cgg cgg cac ggc ccg 192
 Pro Asp Leu Glu Arg Ile Cys Arg Met Val Arg Arg Arg His Gly Pro
 50 55 60
 gag ccg gag cgc acg cgc gcc gag ctc gag aaa ctg atc cag cag cgc 240
 Glu Pro Glu Arg Thr Arg Ala Glu Leu Glu Lys Leu Ile Gln Gln Arg
 65 70 75 80
 gcc gtg ctc cgg gtc agc tac aag ggg agc atc tgc tac cgc aac gcg 288
 Ala Val Leu Arg Val Ser Tyr Lys Gly Ser Ile Ser Tyr Arg Asn Ala
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 gcg cgc gtc cag ccg ccc cgg cgc gga gcc acc ccg ccg gcc ccg ccg 336
 Ala Arg Val Gln Pro Pro Arg Arg Gly Ala Thr Pro Pro Ala Pro Pro
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 cgc gcc ccc cgc ggg gcc ccc gcc gcc gcc gcc gcc gcc gcc gcc ccg ccg 384
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 Pro Thr Pro Ala Pro Pro Pro Pro Pro Ala Pro Val Ala Ala Ala
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 Ser Pro Gly Pro Ala Gln Pro Gly Pro Arg Ala Gln Arg Ala Ala Pro
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 ctg gcc gcg ccg ccg ccc gcg cca gcc gct ccc ccg gcg gtg gcg ccc 576
 Leu Ala Ala Pro Pro Pro Ala Pro Ala Ala Pro Pro Ala Val Ala Pro
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 Gln Pro Pro Pro Pro Gln Pro Gln Pro Pro Pro Glu Gly Gly Ala Val
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gct tct gtt gcc acc ggg cca gac tcc ccg tcc ccc gtg cct ttg ccc Ala Ser Val Ala Thr Gly Pro Asp Ser Pro Ser Pro Val Pro Leu Pro 420 425 430	1296
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 Ser Gln Ala Pro Arg Lys Pro Glu Gly Ala Gln Ala Arg Thr Ala Gln
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tgc aag aag tat gct gaa ctg ctg gag gag cac cgg aat tca cag aag 624
 Cys Lys Lys Tyr Ala Glu Leu Leu Glu Glu His Arg Asn Ser Gln Lys
 195 200 205

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 Asp His Leu Arg Gly Glu His Ser Lys Ala Val Leu Ala Arg Ser Lys
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 Gln Gln Leu Ala Leu Tyr Thr Glu Lys Phe Glu Glu Phe Gln Asn Thr
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 Pro Gln Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Gln Gln Pro
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 Gln Pro Pro Pro Glu Gly Gly Ala Ala Arg Ala Gly Gly Pro Ala Arg
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 Pro Val Ser Leu Arg Glu Val Val Arg Tyr Leu Gly Gly Ser Ser Gly
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 Ala Gly Gly Arg Leu Thr Arg Gly Arg Val Gln Gly Leu Leu Glu Glu
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 Ala Lys Glu Arg Ala Lys Glu Trp Ser Leu Cys Gly Pro His Pro Gly
 385 390 395 400
 Gln Glu Glu Gly Arg Gly Pro Ala Ala Gly Ser Gly Thr Arg Gln Val
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 Phe Ser Met Ala Ala Leu Ser Lys Glu Gly Gly Ser Ala Ser Ser Thr
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